DATA SHEET

PRIMERGY RX330 S1

Issue: **February 2009**

Dual Socket Quad-Core AMD Opteron™ 2000 series based Rack Server - Standard server with high performance at low price

PRIMERGY RX servers offer the perfect solution to downsize data center infrastructure costs efficiently. Basis for it is an IT strategy for more transparency of structure- and administrative expenses as well as maximum use of investments. Our broad portfolio of innovative virtualization, server and solution offerings for TCO reductions of 60% or more provides best prerequisites. Optimized air flow cooling technology assures a long life, highest possible performance/watt as well as by far best in class efficiency -proven by numerous benchmark records.
Benefit from our renowned experience in datacenter technology. These allow it, to transfer the availability rates of high end UNIX servers to RX rack servers, PRIMECENTER rack enclosures and infrastructure products.
PRIMERGY ServerView Suite with remote management functions provides comprehensive management from anywhere at any time. Our flexible custom supply model and our build-to-order process means that only fully built and pre-tested rack solutions are shipped to the customer. Last but not least Fujitsu Technology Solutions proven commitment to green IT offers clear competitive advantages to our customers.

PRIMERGY RX330 S1
Corporate applications in data center server farms with central deployment and control demand increasing performance. The cost-efficient PRIMERGY RX330 S1 extends the PRIMERGY RACK portfolio and focuses rather on standard than on full feature set in comparison to RX300. RX330 S1 is offering enough local storage capacity to be used as a stand-alone application server and for server farms in “scale-out environments” with medium needs for availability features and virtualization focus. With 2 Dual- or Quad-Core AMD Opteron™ processors of the 2000 series and up to 32 Gbytes DDR2-667 direct addressable memory the PRIMERGY RX330 S1 matches your business application requirements perfectly. Therefore the PRIMERGY RX330 S1 with up to 6 hot-plug SAS or SATA hard disks in combination with disk mirroring function, sufficient free PCI slots for heavy I/O requirements, a redundant power supply option, provides you with a budget saving platform.

MAIN FEATURES	BENEFITS
AMD Opteron™ processors of the 2000 series with Quad-Core AMD64Technology and up to 4x 512 Kb SLC and 2 MB common Third Level Cache for convincing performance	With AMD64 the processor gives the company a way to ease into 64-bit computing, as soon as the individual need of the application comes up: Quad-Core offers double Dual-Core CPU performance within one socket. 8-socket performance with two Quad-Core processors is a real benefit for high performance computing
Up to 6x 1TB hot-plug SATA or 450 GB hot-plug SAS hard disks, up to 32 GB memory, 4 PCIe / PCI-X slots, storage integration Fibre channel add on, 2 U housing	Enhanced computing power on compact space, Fast communication path through usage of PCI-Express
Integrated RAID 0, 1, 1E, LEDs, iRMC and ServerView Suite, optional RAID 5 and redundant power supply	Comfort and security for continuous operation
2 x Gbit/s Ethernet LAN	Top-speed communications link via LAN as standard will assure continuity in failover mode

Technical details

Mainboard	
Mainboard type	D 2440
Chipset	BroadCom HT2100 plus HT1000
Processor quantity and type	1 - 2 x AMD Opteron™ 2000 series
Processor options	AMD Opteron™ 2346 HE (4C, 1.8 GHz, SLC: 2 MB, TLC: 2 MB, 2 GT/s, 55 W)
	AMD Opteron™ 2347 HE (4C, 1.9 GHz, SLC: 2 MB, TLC: 2 MB, 2 GT/s, 55 W)
	AMD Opteron™ 2350 HE (4C, 2.0 GHz, SLC: 2 MB, TLC: 2 MB, 2 GT/s, 55 W)
	AMD Opteron™ 2352 (4C, 2.1 GHz, SLC: 2 MB, TLC: 2 MB, 2 GT/s, 75 W)
	AMD Opteron™ 2356 (4C, 2.3 GHz, SLC: 2 MB, TLC: 2 MB, 2 GT/s, 75 W)
Memory slots	8 (4 slots per processor)
Memory slot type	DIMM (DDR2)
Memory capacity (min. - max.)	1 GB - 32 GB
Memory Protection	Advanced ECC Memory Scrubbing SDDC (Chipkill™)
Memory notes	512 MB modules without SDDC
Memory options	8 GB (2 module(s) with 4 GB), DDR2, 667 MHz, PC2-5300
	4 GB (2 module(s) with 2 GB), DDR2, 667 MHz, PC2-5300
	2 GB (2 module(s) with 1 GB), DDR2, 667 MHz, PC2-5300
	1 GB (2 module(s) with 512 MB), DDR2, 667 MHz, PC2-5300
Upgrade notes	For a memory and processor upgrade a BIOS update may be required.
Interfaces	
USB ports	4 x USB 2.0 (1 x front, 2 x rear, 1 x internal for iRMC)
Graphics (15-pin)	1 x VGA
Serial 1 (9-pin)	1 x serial RS-232-C, usable for iRMC or system or shared
Serial 2 (9-pin)	1 x serial RS-232-C
Mouse / Keyboard (PS/2)	2
LAN / Ethernet (RJ-45)	2 x Gbit/s Ethernet
Service LAN (RJ45)	1 x dedicated Service LAN port for iRMC (10/100 Mbit/s) Service LAN traffic can be switched to shared onbord Gbit LAN port
Onboard or integrated Controller	
Fast IDE/Ultra DMA-100	1
RAID Controller	8 port onboard SAS Controller (LSI 1068) with RAID Level 0, 1, 1E for Windows and Linux
SATA Controller	1 x SATA channel for DVD or backup
LAN Controller	BCM 5715, 2 x 10/100/1000 Mbit/s Ethernet (TCP/IP acceleration), PXE-Boot via LAN from PXE server and iSCSI boot (also diskless) via onboard LAN
Remote Management Controller	Integrated Remote Management Controller (iRMC) incl. graphics controller, IPMI 2.0 compatible
Onboard Controller notes	RAID option (PCI card, LSI 1078): RAID level 5
Slots	
PCI-Express x8	2 x (1 x low profile on Motherboard, 1 x full height)
PCI slots	1 x PCI 64-bit/66 MHz
Slot Notes	plus 1x PCI Express x4 or Riser card with 1 x PCI 64-bit/66MHz
Drive bays	
Hard disk bays	6 x 3.5-inch hot-plug SAS/SATA
Hard disk bay configuration	two seperate SAS backplanes
Accessible drive bays	1 x 5.25/1.6-inch for backup devices or CD-RW/DVD
Notes accessible drives	All possible options described in relevant system configurator.

General system information	
Number of fans	3
Fan configuration	one unit incl. control logic
Operating panel	
Operating buttons	On/off switch NMI button Reset button
Status LEDs	System status (amber / yellow) Identification (blue) Hard disks access (green) Power (amber / green) At system rear side: System status (amber / yellow) Identification (blue) LAN connection (green) LAN speed (green / yellow)
BIOS	
BIOS features	ROM based setup utility BIOS settings save and restore Local BIOS update from USB device Online update tools for main Windows and Linux versions Local and remote update via ServerView Update Manager SMBIOS V2.4 Remote PXE boot support Remote iSCSI boot support BIOS settings save and restore BIOS settings save and restore
Supported operating systems	
Supported operating systems	Microsoft® Windows Server® 2008 Microsoft® Windows Server® 2003 Novell SUSE Linux Enterprise Server Red Hat Enterprise Linux VMware Infrastructure Note: Support of other Linux derivatives on demand
Operating system release link	http://ts.fujitsu.com/software ftp://ftp.ts.fujitsu.com/outgoing/osrel.xls
Server Management	
Standard	ServerView Suite: SV Installation Manager SV Operation Mananger SV RAID Manager SV Update Manager SV Agents Online update packages for BIOS, firmware drivers and ServerView Agents ServerView Integration solutions for Microsoft SMS, MOM, SCOM, SCCM and Altiris Deployment Solution ServerView Deployment Manager (fully functional 30-day trial version)
Option	ServerView Deployment Manager (fully functional unlimited version) ServerView Integration for Tivoli TEC®, Tivoli NetView, HP OpenView NNM and HP OpenView iRMC Advanced Pack
Server Management Notes	Regarding Operating System dependencies and product details for ServerView Suite Software Products see dedicated Product Data sheets.
Dimensions / Weight	
Rack (W x D x H)	430 x 770 x 86 mm
Mounting Depth Rack	710 mm
Height Unit Rack	2 U
19” rackmount	Yes
Mounting Cable depth rack	100 mm (900 mm Rack recommended)
Weight	up to 25 kg
Weight notes	Weight may vary depending on actual configuration
Rack integration kit	Rack integration kit as option

Environmental	
Noise emission	Measured according to ISO 7779 and declared according to ISO 9296
Sound pressure (LpAm)	45,6 dB(A) (idle) / 54 dB(A) (operating)
Sound power (LWAd; 1B = 10dB)	6.1 B (idle) / 6.8 B (operating)
Operating ambient temperature	10 - 35°C
Operating relative humidity	10 - 85 % (non condensing)

Electrical values	
Power supply configuration	hot-plug power supply as standard, redundancy as option (1 + 1 redundancy)
Max. output of power supply	625 W
Hot-plug power supply redundancy	Yes
Rated voltage range	100 - 240 V
Rated frequency range	50 - 60 Hz
Rated current max.	5.1 A / 2.5 A (100 V / 240 V)
Rated current in basic configuration	2.4 A / 1.2 A (100 V / 240 V)
Active Power max. (per system unit)	513 W
Apparent power max. (per system unit)	516 VA
Heat emission	1846.8 kJ/h (1750.9 BTU)

Compliance	
Germany	GS
Europe	CE
USA/Canada	CSAc/us ULc/us FCC Class A
Global	CB RoHS (Restriction of hazardous substances) WEEE (Waste electrical and electronical equipment)
Japan	VCCI class A
Compliance notes	There is general compliance with the safety requirements of all European countries and North America. National approvals required in order to satisfy statutory regulations or for other reasons can be applied for on request.
Compliance link	https://sp.ts.fujitsu.com/sites/certificates/default.aspx

Components

Hard disk drives	SATA, 3 Gb/s 1000 GB, 7200 rpm, hot plug, 3.5-inch
	SATA, 3 Gb/s 750 GB, 7200 rpm, hot plug, 3.5-inch
	SATA, 3 Gb/s 500 GB, 7200 rpm, hot plug, 3.5-inch
	SATA, 3 Gb/s 250 GB, 7200 rpm, hot plug, 3.5-inch
	SATA, 3 Gb/s 160 GB, 7200 rpm, hot plug, 3.5-inch
	SAS, 3 Gb/s 450 GB, 15000 rpm, hot plug, 3.5-inch
	SAS, 3 Gb/s 300 GB, 15000 rpm, hot plug, 3.5-inch
	SAS, 3 Gb/s 146 GB, 15000 rpm, hot plug, 3.5-inch
	SAS, 3 Gb/s 73 GB, 15000 rpm, hot plug, 3.5-inch
Hard disk notes	One Gigabyte equals one billion bytes, when referring to hard disk drive capacity. Accessible capacity may vary, also depending on used software
Tape Drives	DDS Gen5, 36 GB , 3 MB/s, half height, SCSI U2W
	DDS Gen6, 80 GB , 6 MB/s, half height, SCSI U160
Optical drives	DVD-ROM, (16xDVD; 48xCD), half height, PATA
	DVD Super Multi, (16xDVD, 8xDVD+RW 6xDVD-RW, 12xDVD-RAM; 48xCD, 32xCD-RW), half height, PATA
SCSI / SAS Controller	SAS Ctrl 3 Gb 4 ports int. / 4 ports ext.

RAID Controller	RAID 5 Ctrl, SAS 3 Gb, Zero Channel RAID (ZCR), 8 ports int. RAID level: 0, 1, 10, 5, 50, 128 MB Cache,
	RAID 5/6 Ctrl, 3 Gb, RAID 5/6 SAS based on LSI MegaRAID 256MB, RAID level: 0, 1, 10, 5, 50, 6, 60, 256 MB Cache,
Fibre Channel controller	Fibre Channel Ctrl 1 x 4 Gb Emulex LPe1150 MMF LC
	Fibre Channel Ctrl 2 x 4 Gb Emulex LPe11002 MMF LC
	Fibre Channel Ctrl 1 x 4 Gb Emulex LPe1150 MMF LC
	Fibre Channel Ctrl 1 x 4 Gb Qlogic QLE2460 MMF LC
	Fibre Channel Ctrl 2 x 4 Gb Qlogic QLE2462 MMF LC
	Fibre Channel Ctrl 1 x 4 Gb Qlogic QLE2460 MMF LC
	Fibre Channel Ctrl 2 x 4 Gb Qlogic QLE2462 MMF LC
LAN Controller	Ethernet Ctrl 1 x 1 Gb Intel® Gigabit CT Desktop Adapter
	Ethernet Ctrl 1 x 1 Gb Intel® Gigabit CT Desktop Adapter
	Ethernet Ctrl 1 x 1 Gb Intel® PRO/1000 GT Desktop Adapter
	Ethernet Ctrl 1 x 1 Gb Intel® PRO/1000 MT Single Port Server Adapter
	Ethernet Ctrl 1 x 1 Gb Intel® PRO/1000 PF Server Adapter
	Ethernet Ctrl 1 x 1 Gb Intel® PRO/1000 PF Server Adapter low profile
	Ethernet Ctrl 1 x 1 Gb Intel® PRO/1000 PT Server Adapter
	Ethernet Ctrl 1 x 1 Gb Intel® PRO/1000 PT Server Adapter low profile
	Ethernet Ctrl 2 x 1 Gb Intel® PRO/1000 PT Dual Port Server Adapter
	Ethernet Ctrl 2 x 1 Gb Intel® PRO/1000 PT Dual Port Server Adapter low profile
	Ethernet Ctrl 4 x 1 Gb Intel® PRO/1000 PT Quad Port Server Adapter low profile
Rack infrastructure	Cable Arm 2U for 3rd party racks
	Cable Management for 19-inch DataCenter / PRIMECENTER Racks
	Rackmount kit full extraction (760mm), tool less mounting
	Rackmount kit partly extraction (524mm), tool less mounting

Warranty	
Standard Warranty	3 years
Service level	On-site Service
Maintenance and Support Services - the perfect extension	
Recommended Service	7x24, Onsite Response Time: 4h
Spare Parts availability	5 years
Service Weblink	http://ts.fujitsu.com/Supportservice

Information about environmental care, policies, programs and our Environmental Guideline FSC 03230:
http://ts.fujitsu.com/aboutus
Take back and Recycling information:
http://ts.fujitsu.com/recycling

All rights reserved, including intellectual property rights. Technical data subject to modifications and delivery subject to availability. Any liability that the data and illustrations are complete, actual or correct is excluded.
Designations may be trademarks and/or copyrights of the respective manufacturer, the use of which by third parties for their own purposes may infringe the rights of such owner.
For further information see http://ts.fujitsu.com/terms_of_use.html
Copyright © Fujitsu Technology Solutions February 2009

Published by
Fujitsu Technology Solutions
http://ts.fujitsu.com/